ELECTRICITY

Mk7A

🌐 **ATLAS** – Class 1 and Class 2

Single Phase Smart Meter with Two-Element Feature

Built on the advanced Atlas metering platform, the Mk7A is a single phase 2-element meter which integrates both a 100A UC3 compliant relay and 40A UC2 compliant load control relay which allows disconnection and reconnection of electrical services remotely.

I **Key Features**

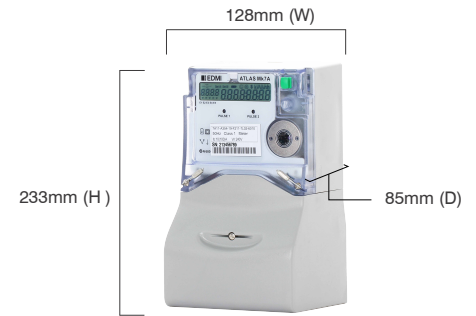| AMI READY	DISCONNECT RELAY	MEASURE EVERYTHING	LARGE LCD DISPLAY	ANTI TAMPER	MULTIPLE COMMS OPTIONS	UPGRADEABLE	LARGE DATA STORAGE

Mk7A

ATLAS - Class 1 and Class 2

Single Phase Smart Meter with Two-Element Feature

128mm (W)
233mm (H)
85mm (D)

Weight: 1.8kg

Standards and Compliance
- Class 1 and Class 2
- IEC 62052-11, 62052-21,*62052-31, 62053-21, 62053-23
- AS 62052.11, 62052.21, 62053.21, 62053.23
- NMI M6

Measurement
- 1 phase 2 wire
- Option for neutral current measurement
- Twin element measurement and control (main 100A, load 40A)

Voltage
- Nominal voltage: 220V - 240V
- Operating range: 176V - 276V
- Withstand: Up to 290V
- Burden: IEC 62053-61 compliant

Current
- WC range: 5/100A, 10/100A
- WC limit: 7000A for 3 cycles
- Burden: <0.5VA/phase

Frequency
- 45Hz - 65Hz

Relay
- 100A Main IEC 62055-31 Annex C UC3
- Flexible relay and second element configuration options
- Relay fault detection
- Enhanced relay switching time ≤10s
- 40A Load control 62055-31 Annex C UC2 and IEC 62052-21

Inputs/Outputs Configuration
- Up to 4 I/O total in 2 isolated groups (maximum 2/*1 relay output)
- Options include: Passive/Active inputs, S0/BOSFET/Relay outputs
- Passive input voltage: 5V, 12V, 48V, 110V, 240V
- Active input voltage: 12V (common ground)
- S0 output: 27V, 27mA maximum
- BOSFET output: 240V, 100mA maximum
- Relay output: 240V, 2A

- 2 Programmable LED indicators
- Programmable output pulse width: 1ms to 100ms

Battery
- Internal battery
- Backup time: 10 years without power (Lithium Battery)
- Option for external battery

Real-time Clock
- Accuracy (internal) within 15 seconds per month at 23°C

Data Memory
- 2 MB of non-volatile memory

Display
- Large 7 segment alphanumeric display with 10.7mm x 6.67mm digit size
- *Large 14 segment alphanumeric display with 10.5mm x 5.1mm digit size
- Up to 60 user-defined screens of any meter parameter
- Definable enunciators
- Display available even without main power

Measured Values
- 2 elements 4 quadrants
- Import/Export/Absolute Wh, varh and VAh
- Fundamental Wh
- Per quadrant Wh, varh and VAh
- Main, load and Total
- W, var, VA, Vrms, Irms
- Power factor, frequency, phasor angles
- Supports ripple control/AFLC

Power Quality Indication
- Total Harmonic Distortion (THD)
- Option for live waveform display
- Sag/Swell
  - 5 Cycle resolution
  - Records time/date/phase/duration average and worst excursion
  - Programmable trigger levels

Load Survey/Profile
- Over 5000 days storage (2 channels, 30-minute intervals)

- AMI Ready
- Supports Advanced Demand Management (ADM) with prioritised rules
- Up to 32 channels and 4 independent surveys
- Intervals programmable from 1 to 60 minutes
- Energy, instantaneous readings, pulsing inputs as channel sources
- Ability to store average/minimum/maximum values for interval duration

Time of Use
- Up to 8 rates plus unified rate
- Up to 32 separate import and export registers
- Daily, weekly, monthly, yearly and special days
- Up to 200 programmable special days
- Up to 61 previous billing periods plus billing totals
- Block or rolling maximum demand
- Time of maximum demand
- Energy, pulsing inputs

Calendar
- Supports Daylight Saving time
- Supports Gregorian or Persian calendars

Tamper Detection and Alarms
- Provision for sealing with conventional wire or plastic seals
- Bypassing current and reverse current detection
- Advanced tamper detection and logging
- Pre-programmed alarms for meter self check
- Alarms trigger LEDs, enunciators, relay outputs or communications event
- Alarms are stored in event logs
- Option for fixed-threshold magnetic tamper detection
- *Option for high-sensitivity 3D magnetic tamper detection with configurable threshold

Security
- Multi-level security (username and password including encrypted log-in)
- Up to 7 independent security levels
- Up to 6 individual users
- AES128 bit encryption

Communications
- Up to 3 independently working communication ports:
  - Optical port: FLAG (IEC 62056-21) or ANSI Type 2 (ANSI C12.18)
  - RS-232 with modem power supply (2G/3G/4G LTE supported)
- UDP/IP, GPRS/PPP capable
- Compatible with MV-90™

Protocol
- EDMI command line
- DLMS
- MODBUS

Software
- EDMI EziView software available for meter programming and reading (Windows® compatible)
- EDMI MultiDrive software available for large scale AMI and AMR solutions (Windows® compatible)
- Supported by many popular third-party multi-vendor AMR systems
- Supports Function Based Setup

Environmental
- Specified operating range: -25°C to +60°C
- Operating range limit: -40°C to +70°C
- Storage range limit: -40°C to +80°C
- Relative humidity: Up to 75% mean, 95% non-condensing for 30 days
- Ingress protection: IP54
- Protective Class II
- Surge Test: 5kV
- Impulse Test: 10kV

*Specifications with * symbol available in manufacturing codes with prefix 7Ax3*

www.edmi-meters.com

EDMI